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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/413,348	10/06/1999	NORIHISA FUKUTOMI	Q56091	1912

7590 10/04/2002

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20037

EXAMINER

KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/413,348

Applicant(s)

FUKUTOMI ET AL.

Examiner

Christopher S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Amendment filed July 19, 2002 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 2 recites "said elastic member being attached to a portion of said sleeve located near an end portion of a coil which is nearest to said needle valve". Figure 1 shows portions of sleeve 17 which are closer to the needle valve than the portion which is attached to the elastic member 18. Therefore, the disclosure, as originally filed, appears to contradict the claimed invention.

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Claims 6 and 7 recite "wherein substantially all of said buffer portion contacts fuel in said fuel passage." The disclosure, as originally filed, does not appear to provide adequate support for such limitation.

5. Claims 2 and 6-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 2 and 6-9 recite a "fuel injection valve for opening and closing a needle valve by driving an armature with a solenoid". The claims, as presented, indicate that the needle valve, armature and solenoid are not components of the fuel injection valve. Rather, the fuel injection valve is claimed for use with a needle valve, armature and solenoid. The specification indicates to the contrary. Starting on page 5, under the section titled 1st Embodiment, the specification discloses the needle valve 15, armature 8 and solenoid 2 as elements of fuel injection valve 1.

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites "a coil" in line 10. This appears to be a double inclusion of the "solenoid" recited in line 2.

Claim Rejections - 35 USC § 102

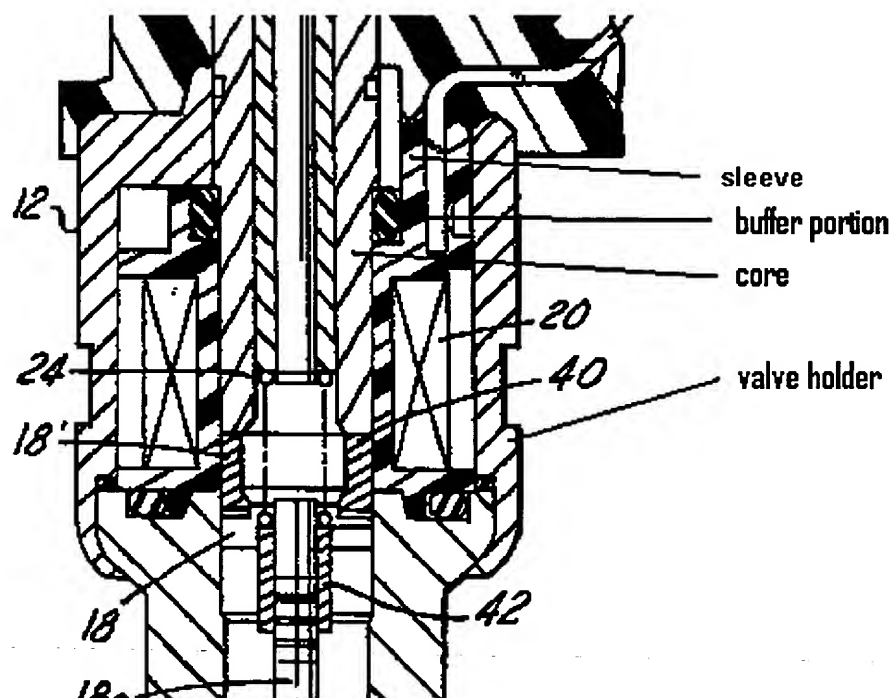
7. Claims 6-9 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Asano (5,188,297).

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Asano discloses a fuel injection valve comprising: a buffer portion/means for damping 39 being an elastic member (O-ring); a fuel passage 22f; an end face (down stream side of 32); a nozzle opening 27. O-ring 39 inherently functions as a buffer portion.

Claim Rejections - 35 USC § 103

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bata (5,427,319).



Beta differs from what is being claimed in the elastic member being attached to a portion of said sleeve located near an end portion of a coil which is nearest to said needle valve. Beta shows O-rings in multiple locations. Providing an elastic member being attached to a portion of said sleeve located near an end portion of a coil which is

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nearest to said needle valve is a mere relocation of parts. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have relocated the O-ring of Beta to provide a seal earlier in the fluid flow to reduce fuel contact.

Response to Arguments

9. Applicant's arguments filed July 19, 2002 have been fully considered but they are not persuasive.

In response to applicant's argument that the references show an O-ring and not a buffer portion, applicant discloses, in the specification, on page 7, lines 9-11, a "buffer portion in fuel pressure is formed by making use of the property as an elastic body of the rubber ring 18. Applicant's figure 1 also shows rubber ring 18 enclosed by sleeve 17 and core 4. The prior art also discloses an O-ring. If applicant's rubber ring functions as a buffer portion, the O-ring in the references inherently must also function as a buffer function.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen can be reached on (703) 308-1946. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7766 for regular communications and (703) 308-7766 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Christopher S. Kim
Examiner
Art Unit 3752

CK
October 3, 2002